

REMARKS/ARGUMENTS

Claims 1–9 and 13 are pending, Claim 13 being added by amendment above. The Office Action rejected Claims 1–4 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,905,465 to Jones et al. (“Jones ’465”). Claims 1–4 were also rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 4,238,866 to Taylor.

The Office Action also rejected Claims 1–6 as being anticipated by or unpatentable over U.S. Patent No. 5,048,278 to Jones et al. (“Jones ’278”). Furthermore, the Office Action rejected Claim 7 under 35 U.S.C. § 103(a) as being unpatentable over Jones ’278 in view of U.S. Patent No. 5,463,815 to Fogle and rejected Claims 8–9 under 35 U.S.C. § 103(a) as being unpatentable over Jones ’278 in view of U.S. Patent No. 4,756,146 to Rouse.

In view of the Amendments and Remarks set forth herein, Applicants respectfully submits that the application is in condition for allowance.

Interview Summary

The undersigned thanks Examiner Alie for the courtesy of conducting a telephone interview on February 2, 2009. In the interview, the undersigned explained the distinction between Jones ’465 and the invention claimed in the present application, particularly as regards the lack of any teaching in Jones ’465 of a cutting head having string outlets located such that the center axes of the string outlets are distributed in planes that are spaced apart along the axial direction by at least 1.8 times the height of the string outlet, in the manner of the claimed invention. More particularly, it was explained that in Jones ’465, while non-adjacent planes containing string outlets may be spaced by the required distance, adjacent planes containing string outlets clearly are not spaced by H_2 (where H_2 is at least about 1.8 times the height of the cutting string/outlet). The undersigned suggested claim amendments generally similar to those above for clarifying the spacing of the string outlet planes. The essence of the difference between Jones ’465 and the claimed invention is that in Jones ’465, it is possible to put the strings in outlets that are spaced more closely than the minimum H_2 distance as claimed,

whereas in the claimed cutting head, the string outlets in any two of the planes are spaced by H2—in other words, the outlets in two most closely spaced (i.e., *adjacent*) planes are spaced by H2. The Examiner indicated in the interview that amendments drawn to this distinction would distinguish over Jones '465.

Summary of Claim Amendments

Applicant has amended Claim 1 generally as indicated above. As amended, Claim 1 requires that the cutting head comprises a plurality of discrete string channels through the cutting head for a plurality of cutting strings to pass through, each string channel defining a string outlet for exit of the respective cutting string from the cutting head, each string outlet having a height (H1) in an axial direction parallel to a rotation axis of the cutting head. The amendments further specify that the string outlets are distributed and configured such that **center axes of the string outlets** are distributed in a plurality of planes (Pac, Pcb) that are perpendicular to the rotation axis and are spaced apart in the axial direction, and such that ***any two of said planes are axially spaced from each other by a distance (H2) that is greater than or equal to approximately 1.8 times the height of each string outlet.*** Support for these amendments is provided in the application as filed, including at least page 7 line 1 through page 9 line 19, and Figures 1-4 and 7, which describe and illustrate the discrete string channels or passageways 112, 112"; page 11, lines 1-23, and Figure 7, which describe and illustrate the string/outlet height H1 and the axial spacing H2 between adjacent planes, as well as the planes passing through the center axes of the string outlets.

In this regard, it is to be noted that the application describes that the string height H1 substantially corresponds to the height of the string outlet (page 11, lines 15-16). Therefore, Claim 1 has been amended to recite what logically follows from that fact, namely, that the spacing distance H2 is greater than or equal to approximately 1.8 times the height of each string outlet.

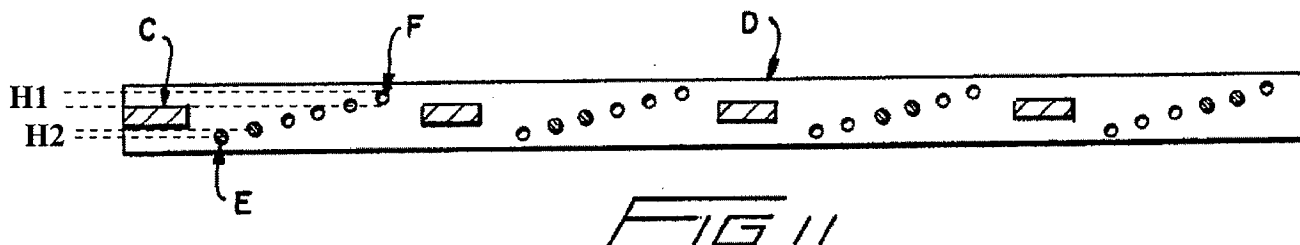
Additionally, the amendment directed to “any two of said planes” being spaced by at least 1.8 times the height of the string outlet is supported by the application’s description that

“adjacent” planes (which, by definition are the most closely spaced planes having string outlets) are spaced by at least 1.8 times the string outlet height. This logically requires that *any two* of such planes are spaced by at least that distance.

Response to Rejections

Turning to the rejections, the Office Action rejected Claim 1 as anticipated by Jones ‘465. The rejection depended on the assertion that the top and bottom holes in Jones’s cutting head are “adjacent” or “near” each other as claimed, and that “claim 1 does not call for more than two planes, [or] that there are no cutting string outlets between the two adjacent cutting string outlets or [planes].” Applicant respectfully submits that “adjacent” by definition means that there are no things of like kind intervening between the two things that are adjacent, and therefore the top and bottom holes in Jones’s cutting head are not “adjacent”.

To further clarify the distinction relative to Jones ‘465, Applicant has amended Claim 1 to replace the “adjacent” terminology by the requirement that “any two of said planes” containing string outlets are spaced by H2. Comparing this requirement to Jones ‘465, it can be seen that it is possible to select two planes that are adjacent and that have a spacing less than H2 (i.e., less than 1.8 the height of the string outlet). FIG. 11 of Jones ‘465, which is representative of FIGS. 11–18, is reproduced below, with adjacent planes and distances corresponding to H1 and H2 superimposed:



Clearly, Jones ‘465 does not meet the requirement that *any two* planes are spaced by at least 1.8 times the string outlet height. Therefore, Jones ‘465 does not disclose every element

recited by independent Claim 1, and for at least this reason, Claim 1 is not anticipated by Jones '465. Accordingly, the rejections of Claim 1-4 based on Jones '465 have been overcome.

New Claim 13 is similar to Claim 1 in most respects, and additionally recites a cutting string as well as the requirement that each string outlet has a height in an axial direction of the cutting head corresponding substantially to a height (H1) of the cutting string in the axial direction. Therefore, Claim 13 is also not anticipated by Jones '465 for substantially the reasons noted above for Claim 1.

The Office Action rejected Claims 1-4 under 35 U.S.C. 102(b) as being anticipated by Taylor directed to a gutter cleaning device. The rejection depended on the assertion that Taylor's "cutting head" includes a plurality of string outlets distributed in a plurality of spaced planes. Applicant respectfully submits that this is incorrect.

Taylor describes that his device includes a rigid block **55** that is generally circular in cross-section but has a pair of diametrically opposite flats **61** (Fig. 3). Cleaning elements **54** (specially formed scoop-shaped lines) are mounted on the flats of the block **55** by a pair of clamping plates **60** that clamp the lines against the flats **61** by attachment of screws **62** (Fig. 6, and col. 5, lines 6-9). Figure 6 makes clear that there are no discrete string channels for the lines or strings **54**, nor are there any definite string outlets distributed in a plurality of spaced planes as claimed in Claim 1. The lines are simply clamped between two flat surfaces, such that the lines could be positioned in any location.

Additionally, Taylor's device is not a cutting head, but rather a gutter cleaning tool. Taylor in fact teaches that his objective is not to cut the leaves in a gutter (col. 2, lines 3-10 and 44-46). As such, Taylor does not teach any desirability of spacing string outlets in a cutting head in the manner claimed in Claim 1.

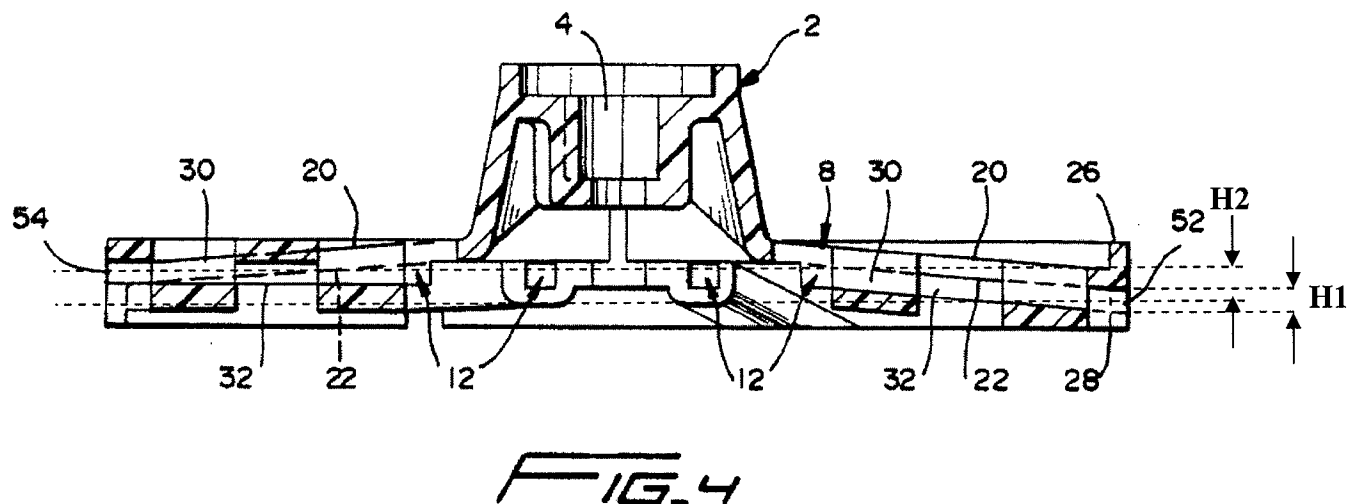
For the reasons noted above, Taylor fails to teach every element of Claim 1, and hence does not anticipate Claim 1 under 35 U.S.C. 102(b). Accordingly, Claims 1-4 are not anticipated

by Taylor. New Claim 13, which is similar in most respects to Claim 1, likewise is not anticipated by Taylor for substantially the same reasons.

The Office Action also rejected Claims 1–6 and 10 under 35 U.S.C. 102(b) or 35 U.S.C. § 103(a) as being anticipated by or unpatentable over Jones '278. Applicant respectfully submits that the rejection of Claims 1–6 is incorrect for the reasons given below.

The rejections based on Jones '278 depend on the assertion that the axes of the cutting string outlets have not been defined, and thus, according to the Office Action, the axis of Jones's outlet **52** could be defined by a line passing through the bottom surface of the outlet **52** and the axis of the outlet **54** could be defined by a line passing through the upper surface of the outlet **54**.

As noted above, however, Claim 1 has been amended to recite that the string outlets are distributed and configured such that *center axes of the cutting string outlets* are distributed in a plurality of planes (Pac, Pcb) that are perpendicular to the rotation axis and are spaced apart in the axial direction, and such that any two of said planes are axially spaced from each other by a distance (H2) that is greater than or equal to approximately 1.8 times the height of each string outlet. Comparing Claim 1's requirements with Jones '278, it is apparent that the planes containing the center axes of his string outlets **52**, **54** are not spaced by at least about 1.8 times the height of each string outlet as claimed. This is clear from Figure 4 below:



Thus, Jones '278 does not teach or suggest a cutting head as recited in Claim 1. Claims 2-6 depend from independent Claim 1. Therefore, for at least the reasons described above, Claims 1-6 are not anticipated by or unpatentable over Jones '278.

New Claim 13 is similar in most respects to Claim 1, and thus likewise is not anticipated by or obvious over Jones '278.

Claim 7 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Jones '278 in view of Fogle. Fogle does not cure the deficiencies of Jones '278. Claim 7 depends from independent Claim 1. Therefore, for at least the reasons described above, the rejection of Claim 7 is overcome.

Claims 8-9 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Jones '278 in view of Rouse. Rouse does not cure the deficiencies of Jones '278. Claims 8-9 depend from independent Claim 1. Therefore, for at least the reasons described above, the rejection of Claims 8-9 is overcome.

CONCLUSION

In view of the remarks presented above, it is respectfully submitted that all pending claims are in condition for allowance. It is respectfully requested that a Notice of Allowance be issued in due course. The Examiner is requested to contact Applicants' undersigned attorney to resolve any remaining issues in order to expedite examination of the present application.

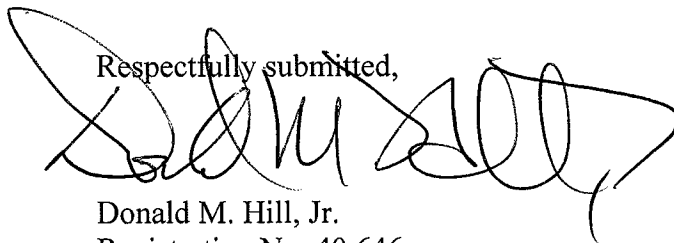
The patentability of the independent claims has been argued as set forth above, and thus Applicant will not take this opportunity to argue the merits of the rejection with regard to specific dependent claims. However, Applicant does not concede that the dependent claims are not independently patentable and reserves the right to argue the patentability of dependent claims at a later date if necessary.

It is not believed that extensions of time or fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper.

Application No.: 10/543,028
Amendment Dated February 3, 2009
Response to Office Action of November 3, 2008

However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required therefor (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 16-0605.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Donald M. Hill, Jr.', is written over the text 'Respectfully submitted,'.

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